UNITED STATES PATENT APPLICATION

FOR

METHOD OF CONTROLLING THE OPERATIONS AND DISPLAY MODE OF AN OPTICAL DISC PLAYER BETWEEN A VIDEO PLAYBACK MODE AND A USER AGENT MODE

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METHOD OF CONTROLLING THE OPERATIONS AND DISPLAY MODE OF AN OPTICAL DISC PLAYER BETWEEN A VIDEO PLAYBACK MODE AND A USER AGENT MODE

5   ## CROSS REFERENCE TO RELATED APPLICATIONS

This patent application claims the benefit of the filing date of Non-Provisional Patent Application, Serial No. 09/906,982, filed on July 17, 2001, entitled "Method of Controlling the Operation Mode of an Optical Disc Player Between Video Playback Mode and a User

10   Agent Mode," which, in turn, claims the benefit of the respective filing dates of Provisional Patent Application, Serial No. 60/288,372, filed on May 3, 2001, entitled "Seamless Context Switching Between Video mode and User Agent Mode in an Optical Disc Player", and Provisional Patent Application, Serial No. 60/293,435, filed on May 24, 2001, entitled "Method of Controlling the Operations Mode of an Optical Disc Player Between a Video

15   Playback Mode and a User Agent Mode", all of which are incorporated herein by reference.

FIELD OF THE INVENTION

This invention relates generally to optical disc players, such as digital versatile disc

20   (DVD) players and other formats, that have user-agent program playback capability (including local as well as network (e.g. the Internet) access capability). In particular, the invention relates to a method of controlling and switching the operations mode of an optical disc player between a video playback mode and a user agent mode.

25   ## SUMMARY OF THE INVENTION

The invention allows optical disc players to seamlessly operate in two modes: in a video playback mode and a user agent mode. In video playback mode, the optical disc player functions to access and display video content stored on the local optical disc, such as would a

30   standard DVD player. In video playback mode, the video menu is activated to allow a user to control the playback of the video content. In user agent mode, the optical disc player is configured to run a user agent program stored either in the local optical disc or optical disc player, to allow a user to browse websites (e.g. access HTML documents) available on a network and in the local optical disc, and perform various functions associated with the

35   websites. Also in the user agent mode, the video content stored on the local optical disc may be shown within the user agent window. In user agent mode, the user agent menu is activated to allow a user to control the playback of the video content.

The invention allows content developers to develop programs that provide interaction between the video playback function and the user agent function of an optical disc player. These programs generally reside on the local optical disc. When the optical disc is inserted into the optical disc player, the optical disc player can read and execute an interaction program on the local optical disc to perform an operation that interacts the video playback function with the user agent function in a specified manner dictated by the program. In many instances, a content developer may want to develop a program that can switch the operations mode of the optical disc player between the video playback mode and the user agent mode in a particular manner, and/or restrict the operation to one particular mode. Such as, for example, the program may cause the optical disc player to operate in video playback mode in order to display a particular video segment while restricting the user from changing the mode, then after the video segment has ended, to switch to the user agent program for accessing a particular website or performing another function, while allowing the user to switch modes at that point.

As discussed below, the invention may be embodied as a method of controlling the operations mode of an optical disc player between a user agent mode and a video playback mode. Also, the invention may be embodied as an optical disc that can be read to control the operations mode of an optical disc player between a user agent mode and a video playback mode. Additionally, the invention may be embodied as a computer readable medium (e.g. a volatile or non-volatile memory) that stores a program interpreter that recognizes and causes the execution of a function stored in a local optical disc of an optical disc player that changes the operations mode of an optical disc player between a user agent mode and a video playback mode. Furthermore, the invention may be embodied as an optical disc player that can read an interactive program stored on a local optical disc that controls the operations mode of the optical disc player between a user agent mode and a video playback mode.

More specifically, an aspect of the invention relates to a method of controlling the operations mode of an optical disc player between a user agent mode and a video playback mode. The method comprises reading an interactive program stored on a local optical disc, wherein the interactive program includes a function that specifies either the user agent mode or the video playback mode as the operations mode for the optical disc player. Once the function is read, the operations mode of the optical disc is changed to the specified mode. In one embodiment, the function is a *bool ForceMode (int mode)* where the changing of the operations mode also results in the disabling of the user control interface to prevent a user from changing the operations mode of the optical disc player. In another embodiment, the function is a *bool SwitchMode (int mode)* which changes the operations mode of the optical disc player without disabling the user control interface, thereby allowing a user to change the operations mode of the optical disc player. A further function is a *bool AllowModeSwitch()*

function which enables the user control interface thereby allowing a user to change the operations mode of the optical disc player.

Another aspect of the invention relates to an optical disc that can be read to control the operations mode of an optical disc player between a user agent mode and a video playback mode. The optical disc includes an interactive program having a function that causes the optical disc player to change the operations mode from the user agent mode to the video playback mode or vice-versa. In one embodiment, the function is a *bool ForceMode (int mode)* where the changing of the operations mode also results in the disabling of the user control interface to prevent a user from changing the operations mode of the optical disc player. In another embodiment, the function is a *bool SwitchMode (int mode)* which changes the operations mode of the optical disc player without disabling the user control interface, thereby allowing a user to change the operations mode of the optical disc player. A further function is a *bool AllowModeSwitch()* function which enables the user control interface thereby allowing a user to change the operations mode of the optical disc player.

Yet another aspect of the invention relates to a computer readable medium that stores a program interpreter that recognizes and causes the execution of a function stored in a local optical disc of an optical disc player, wherein the function causes the changing of an operations mode of an optical disc player from a user agent mode to a video playback mode or vice-versa. In one embodiment, the function is a *bool ForceMode (int mode)* where the changing of the operations mode also results in the disabling of the user control interface to prevent a user from changing the operations mode of the optical disc player. In another embodiment, the function is a *bool SwitchMode (int mode)* function which changes the operations mode of the optical disc player without disabling the user control interface, thereby allowing a user to change the operations mode of the optical disc player. The program interpreter also recognizes and causes the execution of another function *bool AllowModeSwitch()* function which enables the user control interface, thereby allowing a user to change the operations mode of the optical disc player.

Still another aspect of the invention relates to an optical disc player comprising an optical disc reading device to read an interactive program stored on a local optical disc, a video/audio interface to interface with a displaying device for displaying a user agent menu and/or a video playback menu, and a processor to execute a function of the interactive program which changes the operations mode of the optical disc player from a user agent mode where the user agent menu is activated for interaction by a user to a video playback mode where the video playback menu is activated for interaction by the user, or vice versa. In one embodiment, the function is a *bool ForceMode (int mode)* where the changing of the operations mode also results in the disabling of the user control interface to prevent a user from changing the operations mode of the optical disc player. In another embodiment, the

function is the *bool SwitchMode (int mode)* which changes the operations mode of the optical disc player without disabling the user control interface, thereby allowing a user to change the operations mode of the optical disc player. Also, the optical disc player can also recognize and cause the execution of another function *bool AllowModeSwitch()* which enables the user control interface thereby allowing a user to change the operations mode of the optical disc player.

Another aspect of the invention relates to a method of controlling the operations and display mode of an optical disc player between a user agent mode and a video playback mode. The method comprises reading a program stored on a local optical disc that may include a function that specifies the video playback mode as the operations mode for the optical disc player. In the video playback mode, a video playback menu is displayed in the foreground of a displaying device while a corresponding user agent menu is running in the background. The program may include a second function that changes the operations mode of the optical disc player to the user agent mode where the user agent menu is displayed in the foreground of the displaying device.

Other aspects, features, and techniques will become apparent to those skilled in the relevant art in view of the following detailed description of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 illustrates a block diagram of an exemplary optical disc player having network access capability in accordance with the invention;

Figure 2A illustrates a displaying device displaying a frame of a video content in video playback mode;

Figure 2B illustrates a displaying device displaying a website document in user agent mode;

Figure 3 illustrates a flow diagram of exemplary operations of the optical disc player as a result of the execution of the various functions in accordance with the invention; and

Figure 4 illustrates a flow diagram of the operations of the optical disc player when the user control interface is enabled and the user changes the mode; and

Figure 5 illustrates a flow diagram of another exemplary set of operations that an optical disc player can perform in accordance with the invention.

DETAILED DESCRIPTION OF THE INVENTION

Figure 1 illustrates a block diagram of an exemplary optical disc player 100 having network access capability in accordance with the invention. The optical disc player 100

comprises an optical disc reading device 104, a volatile memory 106 (e.g. random access memory), a non-volatile memory 108 (e.g. a magnetic hard disk, flash read only memory (ROM), an electrically erasable programmable read only memory (EEPROM), a network interface 110 (e.g. an interface to the Internet), a video/audio device interface 112, and a user

5   control interface 114. All of the elements are data coupled to a centralized processor 102 as represented by the lines drawn respectively from these elements to the processor 102. The hardware configuration of the optical disc player 100 is not critical to the invention, and can encompass many different hardware configuration types. For instance, the optical disc player 100 can be implemented as a dedicated optical disc player or a personal computer.

10   The optical disc player 100 can operate in at least two modes: a video playback mode and a user agent mode. In video playback mode, the optical disc player 100 functions to access and display video content stored on the local optical disc 116, such as would a standard DVD player. In video playback mode, the video menu displayed on displaying device (e.g. television, computer monitor) is used to control the playback of the video content. In user

15   agent mode, the optical disc player is configured to run a user agent program (e.g. a browser) to allow a user to access website documents on a network or stored in the local optical disc 116, and perform various functions associated with the website document. In the user agent mode, the video content stored on the local optical disc 116 may be shown in a framed window within the user agent window. In user agent mode, the user agent menu is used to

20   control the playback of the video content.

Figure 2A illustrates a displaying device 200 coupled to the video/audio device interface 112 displaying a frame of a video content in video playback mode. In this mode, the displaying device 200 displays full screen video as would a standard DVD player. Thus, in video playback mode, the optical disc player 100 of the invention operates as a standard DVD

25   player. In this case, the video playback menu controls the playback of the video content stored on the local optical disc 116. This is to allow compatibility with standard DVD players and existing optical discs (i.e. discs with no user agent program(s) in it).

Figure 2B illustrates a displaying device 250 coupled to the video/audio device interface 112 displaying a website document (e.g. an HTML document) in user agent mode.

30   As customary, the website document may include information, pictures, and links to other website documents. In addition, the website document may include a frame window for displaying the video content stored on the local optical disc 116. In this case, the HTML menu controls the playback of the video content stored on the local optical disc 116.

An aspect of the invention relates to a method of controlling the operations mode of

35   the optical disc player 100 between the video playback mode and the user agent mode. The method allows content developers to develop programs stored on the local optical disc 116 that interacts the video playback mode with the user agent mode. For instance, a content

developer may want to develop a program that can switch the operations mode of the optical disc player 100 between the video playback mode and the user agent mode in a particular manner, and/or restrict the operation to one particular mode. Such as, for example, the program may cause the optical disc player to operate in video playback mode in order to display a particular video segment while restricting the user from changing the mode, then after the video segment has ended, to switch to the user agent program for accessing a particular website or user agent data residing on local optical disc or performing another function, while allowing the user to switch modes at that point.

In order to accomplish this, the optical disc player 100 incorporates a program interpreter that recognizes certain functions stored in a program on the local optical disc 116 that controls the operations mode of the optical disc player 100. These functions include the *bool ForceMode (int mode), bool SwitchMode (int mode),* and *bool AllowModeSwitch().* The *bool ForceMode (int mode)* function causes the optical disc player 100 to operate in the specified "*mode*" as well as disables the user control interface 114 to prevent a user from changing the operations mode. The *bool SwitchMode (int mode)* function causes the optical disc player 100 to operate in the specified "*mode*" but does not disable the user control interface 114. The *bool AllowModeSwitch()* function causes the optical disc player 100 to enable the user control interface to allow a user to change between the video playback mode and the user agent mode. The following are examples of how these functions can be defined:

Function:	*bool ForceMode (int mode)*
Description:	*Forces a mode switch to the playback mode specified by "mode". Also disables the UOP button "MODE". User mode switch is prohibited after making the "ForceMode" command.*
Parameters:	*mode, an integer value,*
	0. Reserved
	1. User_Agent_Mode
	2. Video_Playback_Mode
Return Value:	*Boolean, "True" if function succeeds, "False" otherwise.*

Function:	*bool SwitchMode (mode)*
Description:	*Switches mode to the playback mode specified by "mode". This function does not disable the UOP button "MODE".*
Parameters:	mode, an integer value,
	0. Reserved
	1. User_Agent_Mode
	2. Video_Playback_Mode
Return Value:	*Boolean, "True" if function succeeds, "False" otherwise.*

Function:	*bool AllowModeSwitch ()*
Description:	*Enables mode switching. Call this function if you make "ForceMode" command to enable player for mode switching. Also enables UOP button "MODE".*
Parameters:	None
Return Value:	*Boolean, "True" if function succeeds, "False" otherwise.*

Content developers can incorporate one or more of these functions in a program stored on the local optical disc 116 to interact video playback mode with user agent mode in a desired fashion. The following discussion details how the optical disc player 100 reads and executes such a program.

Figure 3 illustrates a flow diagram of the operations 300 of the optical disc player 100 as a result of the execution of the various functions described above. In step 302, the optical disc player 100 is initialized by turning it on. Upon start-up, the processor 102 loads an initial operating system program stored in the non-volatile memory 108. The processor 102 under the control of the operating system detects when there is a local optical disc 116 present in the optical disc reading device 104. When such is detected, in step 304 the processor 102 under the control of the operating system checks whether the local optical disc 116 has a certain startup file (e.g. DVDP.INF) that identifies a start-up interactive program (e.g. an HTML file). If the startup file is present, the processor 102 under the control of the operating system loads a program interpreter from non-volatile memory 108 to read and execute the start-up interactive program. The program interpreter recognizes the *bool ForceMode (int mode)*, *bool SwitchMode (int mode)*, and *bool AllowModeSwitch()* functions that may be present in the start-up interactive program.

In step 306, if the program interpreter reads the *bool ForceMode (int mode)* function from the start-up interactive program on the local optical disc 116, the processor 102 under the control of the program interpreter disables the user control interface 114 to prevent a user from changing the operations mode of the optical disc player 100. If in step 306 the program interpreter reads the *bool SwitchMode (int mode)*, in step 318 the processor 102 under the control of the program interpreter enables the user control interface 114 to allow a user to change the operations mode of the optical disc player 100.

Then, in step 310, the processor 102 under the control of the program interpreter determines the operations mode of the optical disc player 100 specified in the *mode* variable. If the specified mode is video mode, in step 312 the processor 102 under the control of the program interpreter disables the video menu (i.e. the video menu provided in the input video stream). The corresponding HTML menu program (related to the video segment being displayed as determined by a content developer) runs in the background and the display device displays appropriate full screen video. This synchronizes the video stream with the HTML data. In step 320, the processor 102 continues video playback. In step 322, if the program interpreter needs to display menu option either through activation of the user control interface or the program application signal (based on menu, timer, or event), then in step 324 the corresponding HTML menu is displayed in the foreground. User can use the HTML menu to perform web related function, such as retrieving a web document from a network coupled

to the network interface 110 or a web document stored on the local optical disc 116 or play video and web document simultaneously.

In step 322, if the program interpreter does not need to display menu option, the processor 102 merely loops back to step 320 to continue video playback.

If the specified mode is the user agent mode, in step 314 the processor 102 under the control of the program interpreter activates the user agent program which displays the appropriate HTML menu, and disables the video menu. In step 316, a user can use the HTML menu to perform web related function, such as retrieving a web document from a network coupled to the network interface 110 or a web document stored on the local optical disc 116 or play video and web document simultaneously.

Figure 4 illustrates a flow diagram of the operations 400 of the optical disc player 100 when the user control interface 114 is activated by a user. In step 402, the processor 102 determines whether the user mode switch button has been pressed. If the user switch mode button has not been pressed, the processor 102 merely loops back to step 402. In step 403, the processor 102 determines whether the mode button is enabled. If the mode button is enabled, the processor 402 changes the operations mode of the optical disc player 100 and returns to step 402 again. If the mode button is not enabled, the processor 102 loops back to step 402.

Figure 5 illustrates a flow diagram of another exemplary set of operations 500 that the optical disc player 100 can perform in accordance with the invention. In step 502, the optical disc player 100 is initialized by turning it on. Upon start-up, the processor 102 loads an initial operating system program stored in the non-volatile memory 108. The processor 102 under the control of the operating system detects when there is a local optical disc 116 present in the optical disc reading device 104. When such is detected, in step 504 the processor 102 under the control of the operating system checks whether the local optical disc 116 has a certain startup file (e.g. DVDP.INF) that identifies a start-up interactive program (e.g. an HTML file). If the startup file is present, the processor 102 under the control of the operating system loads a program interpreter from non-volatile memory 108 to read and execute the start-up interactive program. The program interpreter recognizes the *bool ForceMode (int mode)*, *bool SwitchMode (int mode)*, and *bool AllowModeSwitch()* functions that may be present in the start-up interactive program.

In step 506, if the program interpreter reads the *bool ForceMode (int mode)* function from the start-up interactive program on the local optical disc 116, the processor 102 under the control of the program interpreter disables the user control interface 114 to prevent a user from changing the operations mode of the optical disc player 100. If in step 506 the program interpreter reads the *bool SwitchMode (int mode)*, in step 518 the processor 102 under the control of the program interpreter enables the user control interface 114 to allow a user to change the operations mode of the optical disc player 100.

Then, in step 510, the processor 102 under the control of the program interpreter determines the operations mode of the optical disc player 100 specified in the *mode* variable. If the specified mode is video mode, in step 512 the processor 102 under the control of the program interpreter activates the video playback program, which displays the appropriate video on the displaying device and enables video menu control.

In step 520, the processor 102 continues video playback. In step 522, if the program interpreter needs to display menu option either through activation of the user control interface or the program application signal (based on menu, timer, or event), then in step 526 the video menu is displayed in the foreground and the user agent menu (HTML menu) corresponding to the video segment being displayed is loaded in the background (i.e., the user agent menu resides in a volatile memory and can be easily loaded into the video buffer for displaying). In step 528, the video and user agent menu are synchronized using events generated by processor 102 due to either activation of the user control interface or the program applications and handled by the HTML page event handlers. In step 530, on selection of a video menu option, the processor 102 navigates video menu accordingly, and the user agent menu processes the generated events to synchronize user agent page with video as per the program application requirements. In this way, if the operations mode of the optical disc player is changed to user agent mode, the corresponding HTML document related to the current video stream is displayed, thereby synchronizing the video with the HTML document.

In step 522, if the program interpreter does not need to display menu option, the processor 102 merely loops back to step 520 to continue video playback.

If the specified mode is the user agent mode, in step 514 the processor 102 under the control of the program interpreter activates the user agent program, which displays the appropriate HTML menu, and disables the video menu. In step 516, a user can use the HTML menu to perform web related functions, such as retrieving a web document from a network coupled to the network interface 110 or a web document stored on the local optical disc 116 or play video and display HTML page concurrently.

The following describes various data structures for storing data related to the operations of the optical disc player 100 in accordance with the invention. The first data structure listed below is the *player_mode_info_struct* data structure:

```
typedef struct player_mode_info_struct {
        PLAYER_MODE mode;
        DISPLAY_MODE display_mode;
        SCREEN_STATE screen_state;
        USER_PREF user_pref;
        WEB_PAGE_INFO web_page_info;
} PLAYER_MODE_INFO_STRUCT;
```

The *PLAYER_MODE mode* variable specifies the current operations mode of the optical disc player 100. The following is an exemplary definition of the *PLAYER_MODE mode* variable:

```
typedef enum player_mode {
        PLAYER_User_Agent_MODE = 0x01,          // User-agent-mode
        PLAYER_Video_MODE = 0x02                 // Video-playback-mode
} PLAYER_MODE;
```

Thus, if the *PLAYER_MODE mode* value is *PLAYER_User_Agent_MODE = 0x01*, then the optical disc player's current operations mode is the user agent mode. If the *PLAYER_MODE mode* value is *PLAYER_Video_Mode = 0x02*, then the optical disc player's current operations mode is the video playback mode.

The *DISPLAY_MODE display_mode* variable specifies the display mode of the optical disc player 100. The following is an exemplary definition of the *DISPLAY_MODE display_mode* variable:

```
typedef enum display_mode {
        DISPLAY_WEB_FULLSCREEN,         // User-agent-mode: Browser full screen
        DISPLAY_WEB_IN_WINDOW ,         // User-agent-mode: Browser in small
window over DVD
        DISPLAY_VID_IN_WINDOW,          // user-agent-mode: Video in small window
over browser
        DISPLAY_VID_FULLSCREEN,         // Video-mode: Fullscreen DVD Playback
        DISPLAY_PIC_IN_PIC              // Picture-in-picture mode
} DISPLAY_MODE;
```

Thus, if the *DISPLAY_MODE display_mode* value is *DISPLAY_WEB_FULLSCREEN*, then the displaying device coupled to the video/audio device interface 112 displays the full screen user agent menu. If the *DISPLAY_MODE display_mode* value is *DISPLAY_WEB_IN_WINDOW*, then the displaying device coupled to the video/audio device interface 112 displays the user agent menu in a window over the video playback menu. If the *DISPLAY_MODE display_mode* value is *DISPLAY_VID_IN_WINDOW*, then the displaying device coupled to the video/audio device interface 112 displays the video playback menu over the user agent menu. If the *DISPLAY_MODE display_mode* value is *DISPLAY_VID_FULLSCREEN*, then the displaying device coupled to the video/audio device interface 112 displays the full screen video playback menu. If the *DISPLAY_MODE display_mode* value is *DISPLAY_PIC_IN_PIC*, then the displaying device coupled to the video/audio device interface 112 displays video playback mode and/or user agent mode in picture-in-picture format.

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The *SCREEN_STATE screen state* data structure includes several variables for defining the screen parameters for user agent mode and video playback mode. The following is an exemplary definition of the *SCREEN_STATE screen state* variable:

```
typedef struct screen_state {
        int VID_WINDOW_WIDTH;
        int VID_WINDOW_HEIGHT;
        int WEB_WINDOW_WIDTH;
        int WEB_WINDOW_HEIGHT;
        int VID_WINDOW_X;          // x-coordinate of window from top of the screen
        int VID_WINDOW_Y;          // y-coordinate of window from top of the screen
        int WEB_WINDOW_X;
        int WEB_WINDOW_Y;
} SCREEN_STATE
```

The *int VID_WINDOW_WIDTH* and *VID_WINDOW_HEIGHT* variables respectively define the width and height of the video playback screen, the *int WEB_WINDOW_HEIGHT* and WEB_*WINDOW_HEIGHT* variables respectively define the width and height of the user agent screen, the *VID_WINDOW_X* and *VID_WINDOW_Y* variables respectively define the x-and y- coordinates of the top left of the video playback screen, and the *WEB_WINDOW_X* and *WEB_WINDOW_Y* variables respectively define the x-and y- coordinates of the top left of the user agent screen.

The *USER_PREF user_pref* variable is a user defined variable which allows content developers to style the appearance of the user agent screen and the video playback screen. The following is an exemplary definition of the *USER_PREF user_pref* variable:

```
typedef struct user_preference{
        // User defined
} USER_PREFERENCE;
```

The *WEB_PAGE_INFO web_page* info variable defines the path (e.g. a URL path) of the current web document retrieved by the user agent program. The following is an exemplary definition of the *WEB_PAGE_INFO web_page* variable:

```
typedef struct web_page_info {
        string web_page;            // web page name including its path
} WEB_PAGE_INFO;
```

where the *string web_page* variable define the path to the current web document.

The following is an example of a start-up interactive program that a content developer can create to perform a desired interaction between user agent mode and video playback mode.

This program causes a force mode to video playback mode, starts playing chapter 1 of a video clip, and after the playback of chapter 1 is complete, switches to user agent mode to launch Wmain.htm. Then after selection of a menu item in Wmain.htm, the program continues to playback, say, chapter 2. When it reaches chapter 3, the program switches over to video playback mode.

```
<HTML>
<HEAD>
<TITLE></TITLE>

<SCRIPT                 LANGUAGE="JavaScript"                 FOR="dvdObj"
EVENT="DVDChapterChange">
<!—
        if (2 == dvdObj.Chapter) {
                dvdObj.AllowModeSwitch() ;
                dvdObj.SwitchMode (1) ;
                window.navigate("WMain.htm")       // Display  HTML  Menu  in
wmain.htm
        }
-->
</SCRIPT>

<SCRIPT LANGUAGE="JavaScript">
<!--
function PlayIt(){
        dvdObj.nTitle = 0
        dvdObj.nChapter = 0
        Ret = dvdObj.Chapter_Play (1, 1)
        dvdObj.ForceMode(2)
}
//-->
</SCRIPT>
</HEAD>

<BODY onload="PlayIt();">
        <OBJECT id="dvdObj"
                classid="clsid:45CE85CB-8712-11D3-BD2C-00105ACC3DFC"
                width="640" height="480">
        </OBJECT>
</BODY>
</HTML>



                        File: Wmain.htm (in-part)

<HTML>
<HEAD>

<SCRIPT                 LANGUAGE="JavaScript"                 FOR="dvdObj"
EVENT="DVDChapterChange">
<!--
        if (3 == dvdObj.Chapter) {
                dvdObj.AllowModeSwitch() ;
                dvdObj.SwitchMode (2) ;
        }
-->
</SCRIPT>

<SCRIPT LANGUAGE="JavaScript">
<!--
```

Line numbers in left margin: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50

```
function Play(){
        dvdObj.nTitle = 0
        dvdObj.nChapter = 0
        Ret = dvdObj.Chapter_Play (1, 2)
}
//-->
</SCRIPT>
</HEAD>

<BODY onload="Play ();">

<OBJECT id="dvdObj"
        classid="clsid:45CE85CB-8712-11D3-BD2C-00105ACC3DFC"
        width="640" height="480">
</OBJECT>
```

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In the foregoing specification, the invention has been described with reference to specific embodiments thereof. It will, however, be evident that various modifications and changes may be made thereto without departing from the broader spirit and scope of the invention. The specification and drawings are, accordingly, to be regarded in an illustrative rather than a restrictive sense.

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